

IT Audit & Controls

Catalog Description

This course introduces the fundamental concepts of the information technology audit and control function. The main focus of this course is on understanding information controls, the types of controls and their impact on the organization, and how to manage and audit them. The concepts and techniques used in information technology audits will be presented. Students will learn the process of creating a control structure with goals and objectives, audit an information technology infrastructure against it, and establish a systematic remediation procedure for any inadequacies. The challenge of dealing with best practices, standards, and regulatory requirements governing information and controls is addressed.

Learning Objectives

Students will be able to:

- Understand the role and objectives of the information technology audit.
- Develop an appropriate information technology audit process.
- Identify risks to the confidentiality, integrity, and availability of information and processes.
- Describe the risks inherent in various types of information systems ranging from manual basic accounting to advanced operational information and knowledge for decision making.
- Understand how to design and implement assurance procedures and control measures to effectively manage risks.
- Understand best practices, standards, and regulatory requirements governing information and controls. Gain the ability to measure the degree of compliance with them.
- Understand the role of auditing in systems development, including the review of the development process and participation in systems under development.
- Understand data forensics and how to secure and preserve evidence.
- Learn to develop disaster recovery and business continuity plans.

Topics

- The Need for Information Technology Audit and Controls
- Information Technology Risks

- Protection of information assets
 - Business process evaluation and risk management
 - Systems development and maintenance activities
 - Disaster recovery and business continuity
- Auditing Guidelines and Standards of the Profession
 - Control Objectives for Information and related Technology (COBIT)
 - ValIT
 - ISACA
- Undertaking an Information Systems Audit
 - Internal audit and external audit
- Controls over Information and Processes
 - Physical and environmental controls
 - Network controls
 - System software controls
 - Database controls
 - Application controls
 - Internet and e-commerce controls
 - Installation and operational controls
 - Change controls
 - Access controls
 - Encryption, authentication and non-repudiation
 - End-user controls
 - Software licensing controls
 - Governance
- Controls Assessment
 - Separation of duties
 - Delegation of authority & responsibility
 - System of authorizations
 - Documentation & records
 - Physical control over assets & records
 - Management supervision
 - Independent checks
 - Recruitment & training

Discussion

- The use of case studies, professional standards, and sample audit software programs are encouraged to exemplify concepts covered.